AMENDMENT UNDER 37 C.F.R. § 1.111
SERIAL NO. 09/756,881
ATTORNEY DOCKET NO. Q62603

IN THE CLAIMS:

1. (Currently Amended) A recording apparatus comprising:

dot formation means being divided into a plurality of groups, each of the groups for forming a dot;

drive means for driving the respective groups in the dot formation means in accordance with record data;

fixing signal output means for outputting a fixing signal, ~~to the drive means, instead of the record data, and~~ the fixing signal selecting at least one group in the dot formation means which is not used for forming the dot in accordance with the record data;

fixing means for responding to the fixing signal by outputting to the drive means the fixing signal, instead of the record data, so that selected group ~~so as~~ does not ~~to~~ form the dot; and

control means for transferring the record data to the group, except for the group selected ~~group,~~ by the fixing ~~means~~ signal.

2. (Previously Amended) The recording apparatus as set forth in claim 1, wherein:

the dot formation means is divided into the plurality of groups in accordance with a predetermined dot formation condition assigned thereto, the dot formation condition being related to monochrome recording or color recording;

the fixing signal selects the group in the dot forming means in accordance with the monochrome recording or the color recording; and

the control means expands record information into an image in storage means for transferring the record data from the storage means to the drive means.

3. (Previously Amended) The recording apparatus as set forth in claim 2, wherein the storage means is provided with storage regions enough for a maximum number of groups of the

dot formation means which are used at the same time; and wherein the control means reserves storage regions in the storage means enough for groups used on a present recording.

4. (Previously Amended) The recording apparatus as set forth in claim 2, wherein the storage means is provided with storage regions only enough for a maximum number of groups of the dot formation means which are used at the same time.

5. (Canceled).

6. (Previously Amended) The recording apparatus as set forth in claim 2, wherein when an excess storage region occurs in the storage means in accordance with unnecessity of the record data transmission due to the fixing signal output, the control means utilizes the excess storage region for a serial transmission of the record data.

7. (Previously Amended) The recording apparatus as set forth in claim 2, wherein when an excess storage region occurs in the storage means in accordance with unnecessity of the record data transmission due to the fixing signal output, the control means utilizes the excess storage region for another data processing.

8. (Previously Amended) The recording apparatus as set forth in claim 2, wherein the divided groups of the dot formation means includes a color group for forming a plurality colors of dots, a first black group for forming a black dot on the monochrome recording and a second black group for forming a black dot on the monochrome recording and the color recording; and wherein the fixing signal output means outputs the fixing signal to the first black group on the color recording, and outputs the fixing signal to the color group on the monochrome recording.

9. (Canceled).

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10. (Previously Amended) The recording apparatus as set forth in claim 2, wherein a drive signal is provided with a shift register for parallel-converting the record data which is serial-transmitted; and wherein the fixing means is provided on a signal transmission path arranged between the shift register and the dot formation means.

11. (Previously Amended) The recording apparatus as set forth in claim 2, wherein a drive signal is provided with a shift register for parallel-converting the record data which is serial-transmitted; and wherein the fixing means keeps data determined by the fixing signal in the shift register.

12. (Currently Amended) A method of controlling data, comprising the steps of:

providing a recording apparatus comprising:

dot formation means being divided into a plurality of groups, each of the groups for forming a dot;

drive means for driving the respective groups in the dot formation means in accordance with record data; and

control means for transferring the record data to the group in the dot formation means;

outputting a fixing signal to the drive means, instead of the record data, the fixing signal selecting at least one group in the dot formation means which is not used for forming the dot in accordance with the record data;

fixing the selected group so as not to form the dot; and

transferring the record data to the group except for the ~~selected~~ group selected by the fixing signal.

13. (Canceled).

14. (Previously Amended) The data controlling method as set forth in claim 12, further comprising the step of reserving a storage region in a storage means associated only with the group to which the fixing signal is transmitted.

15. (Currently Amended) A recording apparatus comprising:

dot formation means being divided into a plurality of groups, each of the groups for forming a dot in accordance with a predetermined dot formation condition;

drive means including a mode fixing circuit, for driving the respective groups in the dot formation means in accordance with record data;

storage means including storage regions, for storing only the groups used in the dot formation;

control means for expanding record information into an image in the storage means, for transferring record data from the storage means to the drive means and for reserving storage regions in the storage means only for groups used on a present recording; and

fixing signal output means for outputting a fixing signal ~~to the drive means, instead of the record data, and~~ the fixing signal ~~selecting~~ determining at least one group in the dot formation means which is not used for forming the dot in accordance with the ~~record data~~ dot formation condition in the mode fixing circuit, and for transmitting the fixing signal directly to the drive means ~~associated with a group in the dot formation means~~ instead of the record data ~~, wherein the selected group is predetermined in the mode fixing circuit~~.

16. (Previously Added) The recording apparatus as set forth in claim 15, further comprising mode fixing means for fixing the dot formation condition of the group in the dot formation means.

17. (Currently Amended) The recording apparatus as set forth in claim 15, wherein:

the dot formation condition is related to monochrome recording or color recording; ~~wherein~~

the divided groups of the dot formation means further comprise a color group for forming a plurality colors of dots, a first black group for forming a black dot during monochrome

recording and a second black group for forming a black dot during the monochrome recording and the color recording; and ~~wherein~~

the fixing signal output means outputs the mode fixing signal to the first black group during the color recording, and outputs the mode fixing signal to the color group during the monochrome recording.

18. (Currently Amended) A recording apparatus comprising:

dot formation means being divided into a plurality of groups for forming a dot in accordance with a predetermined dot formation condition related to monochrome or color recording;

driving means for driving the respective groups in the dot formation means and for determining the formation of the dot by inputting into the dot formation condition a mode fixing signal; and

control means for expanding image in storage means corresponding to the data used for dot formation and for transferring data from storage to drive means;

wherein the divided groups of the dot formation means further comprise:

a color group for forming a plurality colors of dots only during the color recording,

a first black group for forming a black dot only during monochrome recording, and

a second black group for forming a black dot during the monochrome recording and during the color recording.

19. (Previously Added) The recording apparatus as set forth in claim 18, wherein the mode fixing signal is transmitted to the first black group during the color recording, and the mode fixing signal is transmitted to the color group during the monochrome recording.

20. (Previously Added) The recording apparatus as set forth in claim 1, wherein the divided groups of the dot formation means further comprise a color group for forming a plurality colors of dots, a first black group for forming a black dot during monochrome recording and a second black group for forming a black dot during the monochrome recording and the color recording;

and wherein the fixing signal output means outputs the mode fixing signal to the first black group during the color recording, and outputs the mode fixing signal to the color group during the monochrome recording.

21. (Previously Added) A recording apparatus, comprising:

dot formation means being divided into a plurality of groups, each of the groups for forming a dot;

drive means for driving the respective groups in the dot formation means in accordance with record data;

fixing signal output means for outputting a fixing signal to the drive means, instead of the record data, and the fixing signal selecting all the groups in the dot formation means in accordance with the record data so that the respective groups form the dot; and

fixing means for fixing all the groups so as to form the dot.

22. (New) A method of controlling data, comprising:

providing a recording apparatus comprising:

dot formation means divided into a plurality of groups, each group being for forming a dot,

drive means for driving the respective groups in the dot formation means in accordance with record data, and

control means for transferring the record data to the groups in the dot formation means;

outputting a fixing signal to the drive means, instead of the record data, the fixing signal selecting all the groups in the dot formation means in accordance with the record data; and

fixing all the groups so as to form the dot.